

## WHAT IS CLAIMED IS:

- 1        1. An acoustical enclosure comprising:
  - 2            a speaker box comprising walls that enclose an acoustic
  - 3            chamber;
  - 4            a partitioning wall coupled to interior surfaces of said walls
  - 5            of said speaker box, said partitioning wall dividing said acoustic
  - 6            chamber into a first chamber and into a second chamber;
  - 7            wherein at least one wall of said walls that enclose said
  - 8            acoustic chamber comprises portions that form an external vent to
  - 9            said second chamber;
  - 10          a first speaker mounted within said partitioning wall, wherein
  - 11          a front portion of said first speaker has access to said first
  - 12          chamber and a back portion of said first speaker has access to said
  - 13          second chamber; and
  - 14          a second speaker mounted within one of said walls that enclose
  - 15          said acoustic chamber, wherein a front portion of said second
  - 16          speaker has access to air outside said speaker box and a back
  - 17          portion of said second speaker has access to said first chamber.

1       2. An acoustical enclosure as claimed in Claim 1 wherein  
2       said partitioning wall comprises portions that form an internal  
3       vent between said first chamber and said second chamber.

1       3. An acoustical enclosure as claimed in Claim 1 wherein  
2       said first speaker and said second speaker are connected in phase  
3       electrically.

1       4. An acoustical enclosure as claimed in Claim 3 wherein  
2       said partitioning wall comprises portions that form an internal  
3       vent between said first chamber and said second chamber.

1       5. An acoustical enclosure as claimed in Claim 1 wherein a  
2       volume of said first chamber is effectively increased due to the  
3       presence of said second speaker within one of said walls that  
4       enclose said acoustic chamber.

1       6. An acoustical enclosure as claimed in Claim 5 wherein  
2       said partitioning wall comprises portions that form an internal  
3       vent between said first chamber and said second chamber.

1       7. An acoustical enclosure as claimed in Claim 1 having a  
2       low frequency response range that extends to approximately thirty  
3       Hertz.

1       8. An acoustical enclosure as claimed in Claim 7 wherein  
2       said partitioning wall comprises portions that form an internal  
3       vent between said first chamber and said second chamber.

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1           9. An acoustical enclosure comprising:

2           a speaker box comprising walls that enclose an acoustic  
3           chamber;

4           a partitioning wall coupled to interior surfaces of said walls  
5           of said speaker box, said partitioning wall dividing said acoustic  
6           chamber into a first chamber and into a second chamber;

7           wherein at least one wall of said walls that enclose said  
8           acoustic chamber comprises portions that form an external vent to  
9           said second chamber;

10           a first speaker mounted within said partitioning wall, wherein  
11           a front portion of said first speaker has access to said first  
12           chamber and a back portion of said first speaker has access to said  
13           second chamber; and

14           a second speaker mounted within one of said walls that enclose  
15           said acoustic chamber, wherein a front portion of said second  
16           speaker has access to air outside said speaker box and a back  
17           portion of said second speaker has access to said first chamber;

18           wherein said second speaker enhances acoustical performance of  
19           said acoustic chamber of said acoustical enclosure by extending a  
20           range of low frequency response of said acoustical enclosure to  
21           approximately thirty Hertz.

1           10. An acoustical enclosure as claimed in Claim 9 wherein  
2           said partitioning wall comprises portions that form an internal  
3           vent between said first chamber and said second chamber.

1 11. A method for enhancing acoustical performance of a dual  
2 chamber acoustical enclosure, said method comprising the step of:  
3 81 extending a range of low frequency response of said dual  
4 chamber acoustical enclosure to approximately thirty Hertz.

1 12. A method as claimed in Claim 11 wherein said step of  
2 extending a range of low frequency response of said dual chamber  
3 acoustical enclosure to approximately thirty Hertz comprises the  
4 steps of:

5 placing a first speaker within a partitioning wall that  
6 separates a first chamber and a second chamber of said dual chamber  
7 acoustical enclosure, wherein a front portion of said first speaker  
8 has access to said first chamber and a back portion of said first  
9 speaker has access to said second chamber of said dual chamber  
10 acoustical enclosure;

11 placing a second speaker within a wall of said first chamber  
12 of said dual chamber acoustical enclosure, wherein a front portion  
13 of said second speaker has access to air outside said dual chamber  
14 acoustical enclosure and a back portion of said second speaker has  
15 access to said first chamber of said dual chamber acoustical  
16 enclosure; and

17 electrically connecting said first speaker and said second  
18 speaker in phase.

1        13. A method as claimed in Claim 12 further comprising the  
2        step of:

3            placing an internal vent in said partitioning wall between  
4        said first chamber and said second chamber.

1        14. A method as claimed in Claim 12 further comprising the  
2        step of:

3            effectively increasing a volume of said first chamber due to  
4        the presence of said second speaker within said wall of said first  
5        chamber of said dual chamber acoustical enclosure.

1        15. A method as claimed in Claim 14 further comprising the  
2        step of:

3            placing an internal vent in said partitioning wall between  
4        said first chamber and said second chamber.

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